

“Was It Covered in the Prerequisite Course? I Totally Forgot!” The Prerequisite Memory Challenge

Nermeen Shehata (ACCT) and Khaled Dahawy (ACCT)

Teaching a course that has prerequisite(s) is surprisingly difficult, especially when courses are in the same subject. We start teaching more advanced topics, assuming by default that students remember and have digested materials that they studied in the prerequisite courses. But the reality is often different.

Financial accounting (ACCT 2001) is the first introductory accounting course that business students must study. This course covers introductory financial accounting topics. Usually, students take ACCT 2001 in their freshman or sophomore year before they declare their major¹. If the student declares accounting as a major, the next accounting course they take is Intermediate Accounting I (ACCT 3001), which builds strongly on the material already studied in ACCT 2001. Sometimes the gap between the two courses is more than one year, during which some students forget the material they had originally studied. This usually results in 3001 instructors wasting several class sessions revising 2001 material. To resolve this problem, we thought of embedding a graded refresher component that inserts ACCT 2001 material in the beginning of the ACCT 3001 course.

The initial plan was to have an on-campus bootcamp where students come to campus for a one- or two-day revision session followed by an exam. However, we found that it would be difficult to implement due to resource limitations and logistical matters. It would require reserving classrooms and hiring instructors, keeping in mind that there are roughly 40-50 students who take ACCT 3001 each semester. Also, this would require students to come to the university prior to the semester they are taking ACCT 3001, which is not feasible if the students are traveling and/or are international students. Another important consideration is that some students remember the material and just need a quick refresher, while others don't remember it at all, and a bootcamp does not allow different students to tackle the material at their own pace.

Moving to a technological option was the best way to overcome the resource and logistical problems, allowing students to work at their own pace, revise as often as they need, and also avoid wasting time in class, while ensuring students know the basics via quizzes and an exam. We replaced the bootcamp idea by an online module which we called a “Refresher Module”. The online “Refresher Module” is an embedded component that weighs 5% of the ACCT 3001 total grade. Students are required to complete it during the first two weeks of the semester. The “Refresher Module” was designed and developed by Nermeen Shehata and Khaled Dahawy with CLT support. It was first offered in Fall 2018 as part of ACCT 3001 course material on Blackboard.

The Refresher Module aims to provide students with a revision of ACCT 2001 material, offered as PowerPoint slides with teacher notes. The module focuses on the first three chapters in ACCT 2001 since they address financial accounting concepts, steps of the accounting cycle, and the various financial statements. These topics are the core of financial accounting, and the most useful building bricks for ACCT 3001. ACCT 2001 is not only a prerequisite for ACCT 3001, but also sets the basics for financial accounting and is therefore a crucial course in the accounting major.

The online module has three main components: informational slides that refresh the material of the three chapters, three quizzes (one for each chapter), and an exit exam. Each student is asked to review the informational materials of every chapter then solve the ungraded chapter quiz, after which they receive feedback on how well they performed, so they can revise the parts they did incorrectly. When students finish the three quizzes, they are directed to solve the exit exam that covers the three chapters comprehensively.

¹ It is worth noting that students in this class are undeclared students. They take the course as part of the School of Business declaration requirements.

The three quizzes should be taken in order; i.e., Quiz 1, then Quiz 2 followed by Quiz 3. There is only one attempt for each of the three quizzes. Passing the module's exam is a requirement for the students to take ACCT 3001; students are required to score at least 18 out of 25. Accordingly, we provide two additional attempts for the exit exam in case a student did not score the required 18 points on their first attempt.

Given that the material gets harder as the students progress with the chapters, we assign ascending time for each quiz: Quiz 1 is to be completed in 20 minutes, Quiz 2 in 30 minutes, and Quiz 3 in 35 minutes. Finally, the exam should be taken in 45 minutes. Once the quiz or exam are started, students need to complete them within the assigned duration. Access to ACCT 3001 material is not provided unless the Refresher Module is completed. Completing the Refresher Module means taking all three quizzes and the exam. Students receive grades once answers are submitted. Also, model answers of the three quizzes are provided upon submission while guiding students to the slides they should refer to if they need to study the topic further.

In addition to the revision module, two physical classes are held to follow up on the module, one is a theoretical review, and the second involves solving a case study. This ensures the prerequisite material has been properly revised and comprehended before building on it. For comparison, before the Refresher Module was introduced, a professor could spend 4-5 class sessions revising the material.

An online survey was given to students one week after completing the module to gather their feedback on the experience. Most of the class filled in the survey where the majority of the students were satisfied with the experience and found the idea of adding the Refresher Module component highly beneficial to them. When asked about the best means of revising the ACCT 2001 material, students had to choose between the Refresher Module only, in-class revision only, or both the module and in-class revision. More than 90% of the students chose the last option confirming that online material should not replace the in-class interaction, but that they complement each other.

Nothing goes without challenges. Our first challenge with having an online module was that students might cheat. We overcame that by having all questions as well as answers shuffled. The three versions of the final exam of the module do not start in the same sequence for all students (i.e. student A sees a different set of exam questions than student B and student C sees a different set). Technical issues were the second huge challenge. CLT supported development of the module and helped in solving most of these. Almost all technical challenges were due to having material released in a certain sequence to students. Two graduate teaching assistants were asked to pilot the module several times until we made sure that it was ready for students.

We think that the idea of embedding a module revising important prerequisite material in a course is beneficial in the subsequent courses. Also, having a grade, even if it is a small portion, assigned to the revision module adds to its seriousness. Students found it very useful when they were given a two-week period to review the material and take the quizzes and exams at their own pace. We believe that our experience is highly successful and can be replicated in any course that has prerequisite(s) to resolve the problems that arise from the time gap between the course and its prerequisite(s). The use of a technology driven "Refresher Module" helped in effectively utilizing the university resources and allowing students to study at their own individual pace. It also saved the instructor precious time that was previously used to review material that was taught in the prerequisite course. In summary, using technology allowed for a flexible solution that helped the university, the students, and the instructor.